LaTex<オンラインレポート執筆講座 (LaTex) >

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LaTeX

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staff Dohui WOO

Latex

Dohui Woo

October 11, 2019

1 Introduction

There is a theory which states that if ever anyone discovers exactly what the Universe is for and why it is here, it will instantly disappear and be replaced by something even more bizarre and inexplicable. There is another theory which states that this has already happened.

Figure 1: The Universe

2 Conclusion

"I always thought something was fundamentally wrong with the universe" [1]

References

[1] D. Adams. *The Hitchhiker's Guide to the Galaxy*. San Val, 1995.


```
1  \documentclass{article}
2  \usepackage[utf8]{inputenc}
3
4  \title{Latex}\author{Dohui Woo}\date{\today}
5
6  \usepackage{natbib, graphicx}
7
8  \begin{document}
9
10 \maketitle
11
12 \section{Introduction}
13 There is a theory which states
14 that if ever anyone discovers exactly what the Universe is for
15 and why it is here,
16 it will instantly disappear and be replaced
17 by something even more bizarre and inexplicable.
18 There is another theory
19 which states that this has already happened.
20
21 \begin{figure}[h!]
22 \centering
23 \includegraphics[scale=1.7]{universe}
24 \caption{The Universe}
25 \label{fig:universe}
26 \end{figure}
27
28 \section{Conclusion}
29 ``I always thought something was fundamentally wrong
30 with the universe'' \citep{adams1995hitchhiker}
31
32 \bibliographystyle{plain}
33 \bibliography{references}
34 \end{document}
```

- ✓ Math-friendly
- ✓ References
- ✓ Resources

```
\documentclass{article}
\usepackage[utf8]{inputenc}

\title{Latex}\author{Dohui Woo}\date{\today}

\usepackage{natbib, graphicx}

\begin{document}

\maketitle

\section{Introduction}
There is a theory which states
that if ever anyone discovers exactly what the Universe is for
and why it is h
it will instantly
by something even more bizarre and inexplicable.
There is another theory
which state

\begin{figure}[h!]
\centering
\includegraphics[scale=1.7]{universe}
\caption{The Universe}
\label{fig:universe}
\end{figure}

\section{Conclusion}
``I always thought something was fundamentally wrong
with the universe'' \citep{adams1995hitchhiker}

\bibliographystyle{plain}
\bibliography{references}
\end{document}
```

Suit for Academia

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\ is for a special use

---

functions	\tableofcontents
symbols	\alpha
user-specified functions	\newcommand

Preamble

Contents

¥documentclass{article}

¥begin{document}

¥end{document}

What you **have to write**

What you **want to write**

Preamble

Title, margins, author(s), date, and etc.

(What you **have to write**)

domument **Class**

: determines the purpose of the document

¥documentclass{article}

- article
- report
- book
- beamer

Package import

: brings in the functions you need

¥usepackage{CJKutf8}

https://overleaf.com/learn/latex/Japanese

- geometry
- graphicx
- natbib

etcetc.: set title, indent lengths, or line spaces, or declare your function

```
¥documentclass{article}

¥usepackage[hangul]{kotex}
¥usepackage[top = 2cm]{geometry}
¥usepackage{natbib, graphicx}

¥geometry{bottom = 0cm, nofoot}
¥title{An Introduction to LaTex}
¥author{Dohui Woo}
¥date{}
```

✓ Set **Title**, author(s), date

```
¥title{A Striking Title}        % you can't omit this item
¥author{Alice ¥and Bob}
¥date{¥today}
```

✓ maketitle

```
¥maketitle
```

Margin

✓ Package “**geometry** “

options : top, bottom, left, right, ...,
onecolumn, twocolumn,...

¥usepackage[top=10cm]{geometry}

Contents

Structure, math, tables, figures, references and etc.

(What you **want to write**)

¥section{Set}

¥subsection{The meaning of set and subset}

¥subsubsection{propositoin and condition}

¥paragraph{A proposition is,} a declarative sentence …

¥subparagraph{example} Which of the following …

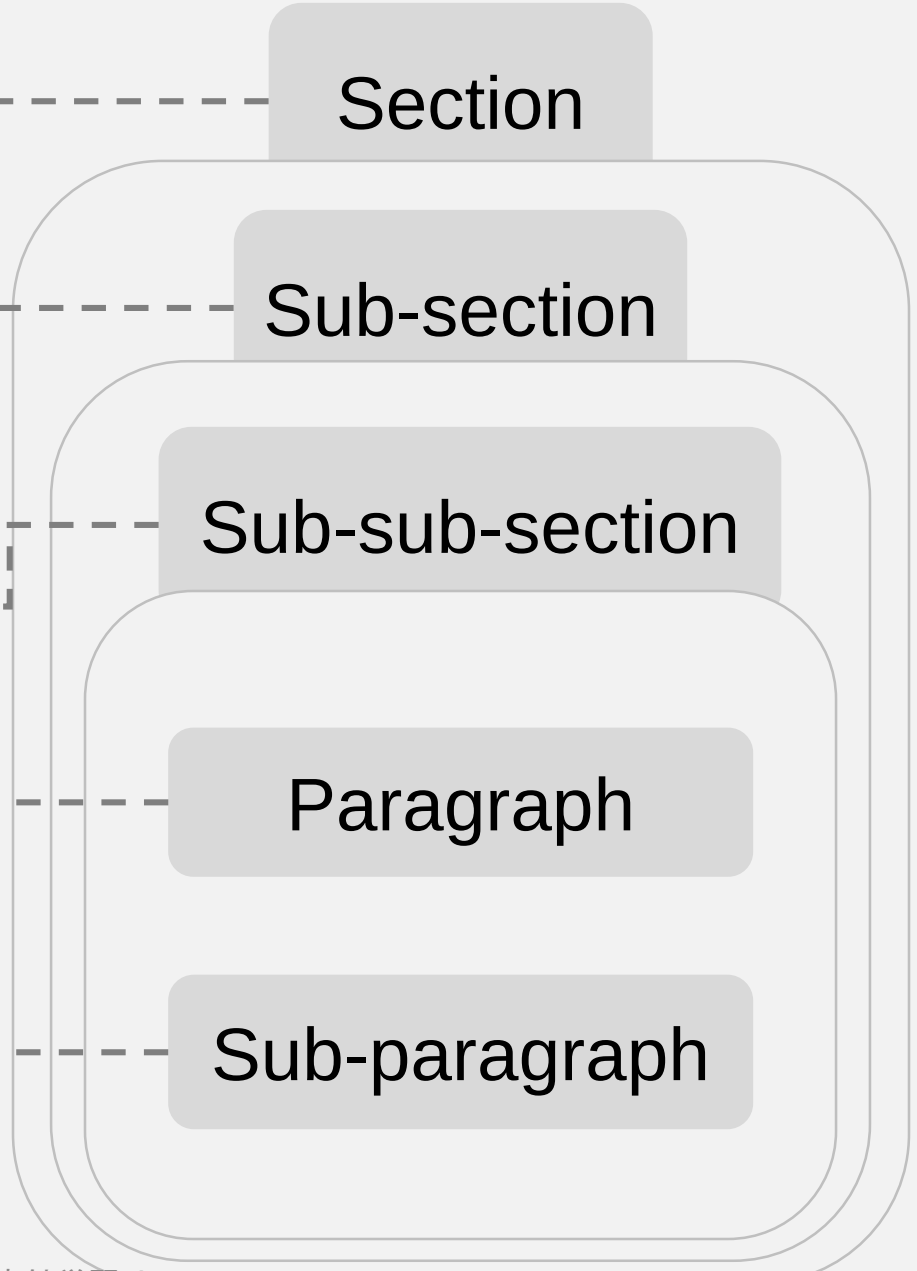
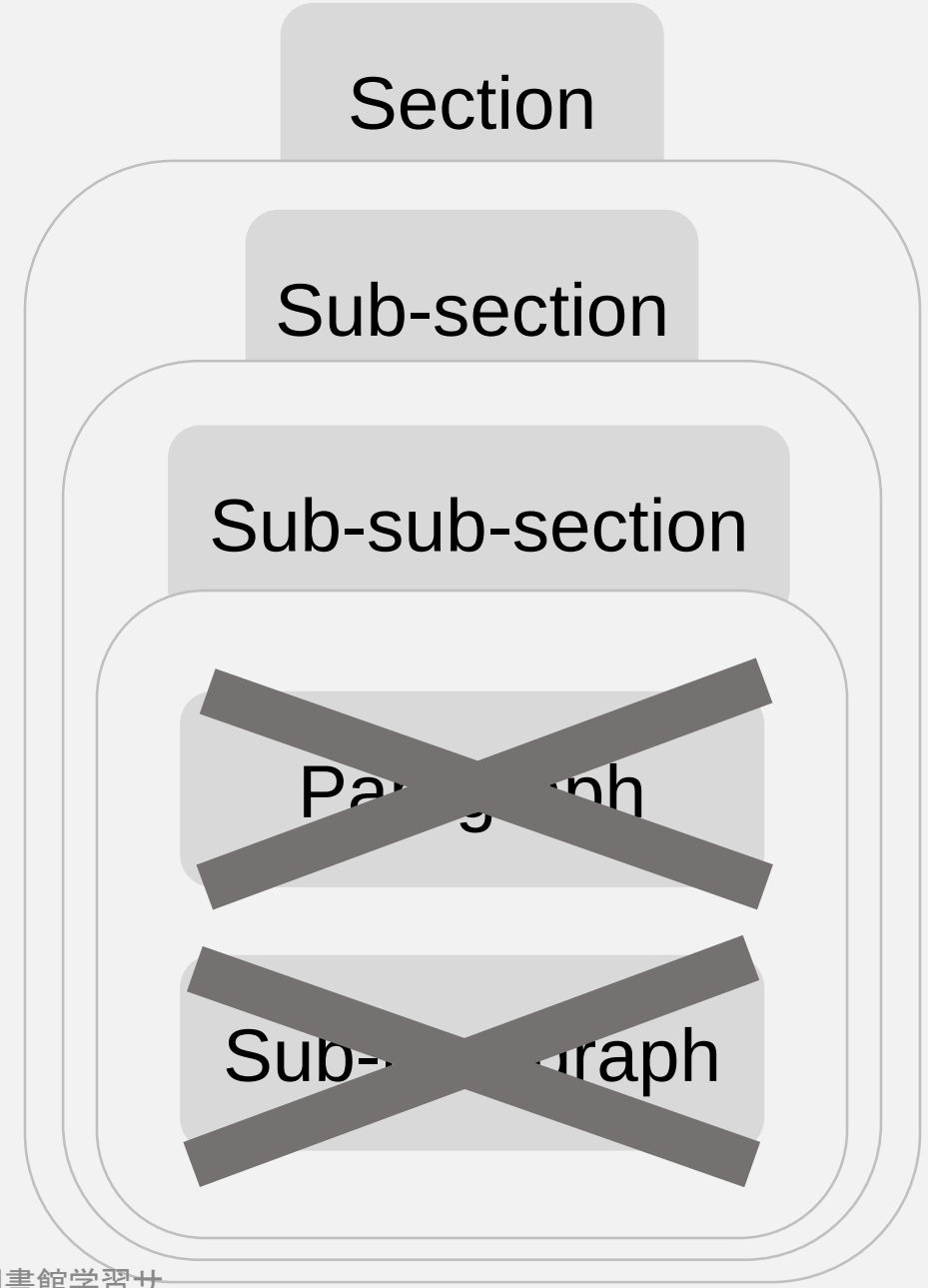


Table of contents

¥tableofcontents



The solution of $ax^2 + bx + c = 0\ (a \neq 0)$ is,

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \qquad (1)$$

```
1  \documentclass{article}
2  \begin{document}
3  ax^2
4  \end{document}
```

Missing $ inserted.

✓ Math mode

- **$ math $: words**

  The kinetic energy **K** of an object with a mass **m** moving with a velocity **v** is

- **\[math \] : phrases**

\[\ frac{1}{2} mv^2 \]

The solutions of $ax^2 + bx + c = 0\ (a \neq 0)$ is,

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

✓ tabular environment

```
¥begin{tabular}{|l|c|r|}
        ¥hline
        A1   & B1   &C1   ¥¥ ¥hline
        A2   & B2   &C2   ¥¥ ¥hline
¥end{tabular}
```

A1	B1	C1
A2	B2	C2

✓ tablesgenerator

✓ table environment

```
¥begin{table}
    ¥caption{your caption}
    ¥begin{tabular}{||l|c|r|}
        ...
    ¥end{tabular}
¥end{table}
```

Table1. your caption

A1	B1	C1
A2	B2	C2

Table1. Prisoners' dilemma

	C	D
C	(1, 1)	(0,10)
D	(10,0)	(1, 1)

- ✓ Package graphicx
- ✓ figure environment

```
¥usepackage{graphicx}
```

```
¥begin{figure}
    ¥includegraphics{universe}
    ¥caption{pic of universe}
¥end{figure}
```

✓ Location : h(ere), t(op), b(ottom), p(age)

```
¥begin{figure}[option]
```

✓ Size : width, height, scale

```
¥includegraphics[option] {figure}
```


Tag a Label

¥begin{figure}
...
¥label{uni}
...
¥end{figure}

Fig. 1: Yay! Universe!

Figure. 1 was taken when I was travelling the universe.

Refer

Figure. ¥ref{uni} is taken when I was travelling the universe.

Figure 1: The Universe

2 Conclusion

"I always thought something was fundamentally wrong with the universe" [1]

References

[1] D. Adams. *The Hitchhiker's Guide to the Galaxy*. San Val, 1995.

- ✓ quote
- ✓ references

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File Name

name.bib

① *.bib file

Cancel Create

add

② ¥bibliography{}

③ ¥bibliographystyle{}

in main text

```
@book{davis2017selfish,
  title={The selfish gene},
  author={Davis, Nicola},
  year={2017},
  publisher={Macat Library}
}
```

@book{adams1995hitchhiker,
title={The Hitchhiker's Guide to the Galaxy},
author={Adams D.d},
isbn={9781417642595},
year={1995},
publisher={San Val}}

@book{davis2017selfish,
title={The selfish gene},
author={Davis, Nicola},
year={2017},
publisher={Macat Library}}

Key

- Refer a document using the Key
- Changeable

Numbered

¥**bibliographystyle{plain}**

cite with **p**arentheses ¥citep{Key} ▶ [1]

Author-year

¥**bibliographystyle{plainnat}**

¥citep{Key} ▶ [Alonso et al., 2008]

cite within **t**ext ¥citet{Key} ▶ Alonso et al. [2008]

¥**bibliography{name}**

Learning support desk

with Zoom

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α	¥alpha	
a^x	¥a^x	
$\sqrt{a}$	¥sqrt{a}	**sq**uare **r**oo**t**
$\frac{1}{2}$	¥frac{1}{2}	**frac**tion
$\neq$	¥neq	**n**ot **eq**ual to
$\geq$	¥ge	**g**reater than or **e**qual to

- **¥begin{equation}...¥end{equation}**

Japanese

- ✓ LaTeX
- ✓ Add “latexmkrc”

```
$latex = 'platex';
$bibtex = 'pbibtex';
$dvipdf = 'dvipdfmx %O -o %D %S';
$makeindex = 'mendex %O -o %D %S';
```

www.overleaf.com/learn/latex/Japanese ←copy and paste